PROCEEDINGS OF THE BIOLOGICAL SOCIETY OF WASHINGTON

NINE NEW SUBSPECIES OF BIRDS FROM VENEZUELA

BY WILLIAM H. PHELPS AND WILLIAM H. PHELPS, JR.

Study of specimens in the Phelps Collection, Caracas, and of comparative material in the American Museum of Natural History, shows the following new subspecies. Specimens listed are in the Phelps Collection unless otherwise specified.

We wish to express our thanks to Mr. James L. Peters of the Museum of Comparative Zoology, to Dr. John T. Zimmer of the American Museum of Natural History and to Dr. Herbert Friedmann of the United States National Museum for access to the collections in those institutions.

Names of colors are capitalized when direct comparison has been made with "Ridgway's Color Standards and Color Nomenclature," 1912.

Crypturellus undulatus manapiare, new subspecies

Type: From San Juan de Manapiare, Río Manapiare, Territorio Amazonas, Venezuela; 160 meters. No. 52247, Phelps Collection, Caracas, Venezuela. Adult male collected March 3, 1951, by Ramón Urbano. (Type on deposit at the American Museum of Natural History.)

Diagnosis: Differs from all races of C. undulatus by the darker, more dusky forehead and fore-crown, instead of more brownish; closest to C. u. confusus (Brabourne and Chubb) from the Rio Madeira from which it differs only by color of crown; differs from C. u. yapura (Spix) from Manaos, additionally, by heavier barring on flanks and crissum.

Range: Collected on the Manapiare River and its affluent, Caño Negro, in the Ventuari River Basin, in the Tropical Zone.

Description of Type: Forehead and fore-crown brownish dusky, merging into the more brownish of neck, back Sayal Brown, paler on the mantle and merging into the more grayish rump and light grayish tail; entire upper parts except head and neck finely vermiculated with black; sides of head grayish brown. Chin white merging into the pale gray throat which is heavily spotted with white; breast and sides grayish olive, browner anteriorly with very fine dusky vermiculations; abdomen, anteriorly, buffy gray merging into whitish posteriorly where barred prominently with brownish black; flanks buffy, heavily barred with brownish black. Primaries (and bastard wing) Natal Brown, inner webs on lower surface broadly edged with grayish and finely vermiculated with black as on back; external under wing-coverts Natal Brown, internal ones grayish white; axillaries pale brown. Tail dark buffy, below more grayish, with fine black vermiculations. Bill (in life) "black"; feet "yellowish green"; iris "chestnut". Wing, 158 mm.; tail, 50;

culmen from base, 33; tarsus, 53.

Remarks: Sexes alike. Size similar to yapura. Range of measure-

8-PROC. BIOL. SOC. WASH., VOL. 65, 1952

(39)



ments: six adult males—wing, 158-175(165.1); tail, 50-55(51.3); culmen from base, 33-34(33.3); five adult females—wing, 163-173(168.4); tail, 50-55(52.8); culmen from base, 33-35(33.6). Measurements of yapura: six males from Cacao Pereira Igarapé, lower Rio Negro, Brasil—wing, 156-167(161.8); tail, 43-47(44.7); culmen from base, 31-34(32.6).

On two previous expeditions to the Ventuari River region this tinamou was heard singing, first in 1947 on the Caño Parucito and then in 1949 on the Río Parú and its affluent the Río Asisa. We tried unsuccessfully to collect it but its melancholic call was so melodious and characteristic that we even gave the unknown bird a name: "The Tales of Hoffmann Tinamou" because its most frequent song reminded us of the first three notes of the Barcarolle. The range, consequently, probably extends to the rivers mentioned and also to the upper reaches of the Ventuari River where the Maquiritare indians informed us that this tinamou is also found.

The known range of the new race is separated by some 700 kilometers from that of *simplex* (Salvadori) in southern British Guiana. The ranges of the other races of *undulatus* are still more distant.

An immature female is similar to the adults except that many feathers on the breast and sides have prominent black spots or bars.

Six of the specimens are decidedly more buffy below, less grayish, than the type, while five are more rufous, less buffy, above, but there are also intermediates in the series.

Specimens Examined

- C. u. undulatus¹.—BRAZIL: Chapada, Matto Grosso, 4¢, 19; Urucum, 3¢, 29. BOLIVIA: Chiquitos, 1¢; Prov. of Sara, 1¢.
 - C. u. confusus¹.—BRAZIL: Rosarhino, Rio Madeira, 26, 19.
- C. u. vermiculatus¹.—BRAZIL: Araguaya, Goyaz, 3 & 19; Rio Jordao, Minas, 1 &.
- C. u. adspersus¹.—BRAZIL: Rio Tapajoz, 13, 19; Anaré, Igarapé, Rio Madeira, 23, 49.
- C. u. yapura¹.—BRAZIL: Cacao Pereira Igarapé, Rio Negro, 7 &, 1 \, COLOMBIA: La Murelia, Caquetá, 1 \, 0, 1 \, 0. ECUADOR: Rio Suno Abajo, 1 \, 0; Boca Rio Curaray, 2 \, 0, 2 \, 0.
- C. u. manapiare.—VENEZUELA: San Juan de Manapiare, Río Manapiare, Territorio Amazonas, 6 & (incl. type), 3 \, 2 \, 2 \, juv., 1 (?) juv.; Caño Negro, Río Manapiare, 2 \, 2.

Lurocalis semitorquatus schaeferi, new subspecies

Type: From Rancho Grande, Estado Aragua, Venezuela; 1130 meters, No. 53969, Phelps Collection, Caracas, Venezuela. Adult male collected February 3, 1951, by Ernst Schaefer, Rancho Grande Biological Station. (Type on deposit at the American Museum of Natural History.)

Diagnosis: Nearest to L. s. semitorquatus (Gmelin) from which it differs by larger size; blacker, less brownish throat and breast, with paler buffy speckling; the light areas on wing-coverts and tertials whiter and more extensive. Differs greatly from L. s. ruftventris Taczanowsky by the barred abdomen.

Range: Known only from the region of Rancho Grande in the

¹Specimens in the American Museum of Natural History.

Tropical and lower Subtropical Zones at altitudes of 450 and 1150 meters.

Description of Type: Top and sides of head, nape and back brownish black, more brownish on uropygium, speckled with pale buffy (whitish on nape) on edges of feathers giving a striped appearance; prominent whitish areas laterally on mantle; concealed feathers above the eye, and in upper tail-coverts, largely white. Chin blackish speckled with white; a prominent white band across anterior throat; posterior throat and breast blackish with buffy and whitish speckling and barring; abdomen Cinnamon, more whitish anteriorly; under tail-coverts paler. Wings Bone Brown; outer webs of remiges barred with dark buff; tips of inner primaries largely whitish; tertials largely white with prominent blackish shaft spots, minutely and closely speckled with pale brown; upper wing-coverts barred or speckled with buff as on primaries, middle ones largely edged with white; under wing-coverts and axillaries uniform with abdomen. Tail Bone Brown; rectrices, except middle ones, barred with buffy, apically with whitish; middle rectrices widely barred with grayish with brown mottling. Bill (in dried skin) black; feet brown. Wing, 195 mm.; tail, 80; culmen from base, 20; culmen from nostril, 7; tarsus, 12; weight in flesh, 83 gr.

Remarks: Sexes alike. Wing longer than in semitorquatus. Range of measurements: ten adult males—wing, 175-210(185.4) mm.; tail, 75-98 (79.3); culmen from base (6), 17-20(18.6); ten adult females—wing, 183-198(188.5); tail, 73-88(79.5); culmen from base (2), 21-21(21); ten adults of undetermined sex—wing, 186-210(195); tail, 84-88(85.3). Measurements of semitorquatus from Trinidad: two adult males—wing, 163-169(166); tail, 73-75(74); culmen from base, 17-18(17.5); two adult females—wing, 176-177(176.5); tail, 75-80(77.5); culmen from base, 17-18(17.5); one adult of undetermined sex—wing, 170; tail, 76;

culmen from base, 18.

There is a specimen in the American Museum of Natural History, a male from Telembi, northwestern Ecuador, which had been identified as semitorquatus, quite outside of the range of this subspecies. Dr. John T. Zimmer suspected that it might be noctivagus Griswold² from Panamá, known only from the unique type in the Museum of Comparative Zoology, as it seemed different from the American Museum series from Trinidad. Mr. J. L. Peters sent this type to Dr. Zimmer for comparison. The Telembi skin proved to be more similar to it than to semitorquatus. It resembles noctivagus in larger and rounder, more rufescent, spots on crown, back and upper tail-coverts. The breast markings are intermediate, not as prominent and rufous as in noctivagus but closer to it than to semitorquatus.

We are pleased to name this bird after the collector, Dr. Ernst Schaefer, in charge of the Rancho Grande Biological Station, who, in the short time that he has been there, has already made important contributions to the ornithology of the Rancho Grande National Park.

Specimens Examined

L. s. noctivagus.—PANAMA: Salamanca Hydrographic Station, Río Pequení, 1 2³. ECUADOR: Telembi, 1 3¹.

²Proc. New England Zool. Cl., 15, p. 101, 1936.

Specimens in Museum of Comparative Zoology.

L. s. rufiventris.—VENEZUELA: San Jacinto, Mérida, 13; Mérida, 13; La Sierra, 12; Montanas, 13 juv.; Conejos, 13; Valle, 12. COLOMBIA: Subia, Cundinamarca, 12; Aguadita, Fusugasuga, 12.

L. s. schaeferi.—VENEZUELA: Rancho Grande, Aragua, 13 (type), 13, 43, 89, 39; inear Rancho Grande (450 m.), 33, 13, 13, 29.

L. s. semitorquatus.—TRINIDAD¹: 2 ô, 2 9, 1(%). VENEZUELA: La Faisca mine, Cerro Paurai-tepui, 1(%) juv.

Nyctiprogne leucopyga pallida, new subspecies

Type: From San Fernando do Apure, Estado Apure, Venezuela; 140 meters. No. 47719, Phelps Collection, Caracas, Venezuela. Adult female collected October 30, 1948, by Ramón Urbano. (Type on deposit at the American Museum of Natural History.)

Diagnosis: Differs from N. l. exigua Friedmann of the Upper Orinoco by paler upper parts, the buffy markings lighter and more extensive and the blackish ones more restricted; differs from N. l. leucopyga (Spix) of the Amazon River by being paler and smaller.

Range: Along the lower Orinoco River from Barrancas up to Caicara and up the Apure River to Guasdualito; also on the lower Paragua River.

Description of Type: Head, back and rump Pinkish Cinnamon, finely speckled with dusky on head and rump and finely barred on nape; top of head striped prominently with blackish; scalpulars with heavy black blotches along shaft and edged with prominent Ochraceous-Buff spots. Chin, throat, breast and sides Pinkish Cinnamon, finely barred with dusky; middle breast barred more heavily with buffy white and dusky; abdomen, flanks and under tail-coverts whitish, heavily barred with brownish black. Wings Benzo Brown; outer webs of primaries and secondaries barred with Ochraceous-Tawny, the inner webs lightly so with pale buffy; tertials finely speckled with pale buffy; upper wingcoverts finely speckled and spotted with buffy; under wing-coverts and axillaries dusky, barred with whitish. Tail Natal Brown; six outer rectrices barred basally with Ochraceous-Tawny, whitish on under surface and with a broad white band across the middle, confined to the inner web on the outermost; four middle rectrices barred with buffy mottling.

Bill (in life) "black"; feet "black"; iris "dark". Wing, 125 mm.; tail, 88; exposed culmen, 4; tarsus, 10.

Remarks: Sexes alike. Size similar to exigua. Range of measurements of topotypical specimens from San Fernando de Apure: one adult male—wing, 126 mm.; tail, 88; exposed culmen, 4; four adult females—wing, 120-128(124); tail (3), 82-88(86); exposed culmen, 4-4(4); one of undetermined sex—wing, 124; tail, 84; exposed culmen, 4.5. Measurements of exigua from Upper Orinoco: three adult males—wing, 132-135 (133.3); tail, 85-90(88); exposed culmen, 4-4.5(4.2); three adult females—wing, 125-130(127.3); tail, 83-88(85.7); exposed culmen, 4-4.5 (4.2).

The specimens from San Fernando de Atabapo and Maipures are intermediates but closer to exigua while those from Ciudad Bolívar and Barrancas, though not typical, are closer to pallida.

⁴Specimens in Estación Biológica de Rancho Grande, Venezuela.

Specimens Examined

N. l. leusopyga.—BRAZIL: Pinhel, Rio Tapajoz³, 1 &, 2 \, 1 (?); Miri-

tituba, Rio Tapajoz, 12⁵; Santarem, 13³, 12³, 1 (? juv.)⁵.

N. l. exigua.—VENEZUELA: Río Pacila, Caño Casiquiare, $2 \, \delta^5$; frente a la Isla Corocoro, $1 \, \varphi$; San Juan de Manapiare, $2 \, \delta^1 \, \varphi$, $2 \, (?)$; Puerto Yapacana, $1 \, \delta$, $1 \, \varphi$, $2 \, (?)$; San Fernando de Atabapo, $2 \, \delta^1 \, \varphi$, $1 \, \varphi^1$; Maipures, $1 \, \varphi^1$.

N. l. pallida.—VENEZUELA: Guasdualito, 1(?); San Fernando de Apure, 13, 49 (incl. type), 1(?); Caicara, 13, 13, 19; Altagracia, 13, 39; Ciudad Bolívar, 23, 29; Barrancas, 13; La Paragua, 19.

Phaethornis longuemareus imatacae, new subspecies

Type: From Cerro Tomasote, El Palmar, Estado Bolívar, Venezuela; 500 meters. No. 17728, Phelps Collection, Caracas, Venezuela. Adult male collected April 6, 1942, by Fulvio Benedetti. (Type on deposit at

the American Museum of Natural History.)

Diagnosis: Differs from all races of P. longuemareus by paler, more whitish abdomen. From P. l. longuemareus (Lesson), of Trinidad, the Delta of the Orinoco and the Guianas, it differs additionally by paler throat, buffy gray instead of deep buff; breast whiter, buffy white instead of buffy; and upper tail-coverts with less rufous. From P. l. ignobilis Todd, of the Caracas region, and P. l. striigularis Gould, of the Lake Maracaibo region and Colombia, it differs additionally by a larger bill.

Range: Known only by the type specimen from Cerro Tomasote, Sierra Imataca, in the Tropical Zone.

Description of Type: Top of head and lores Bone Brown, feathers very slightly edged with bronzy, very much so on nape; back and uropygium Buffy Citrine, upper tail-coverts broadly edged with rufous brown; a broad buffy white superciliary stripe; a large dusky postorbital spot; gular region pale buffy. Chin and throat widely streaked with dusky, merging into the grayish buff of breast; sides of neck Snuff Brown; sides and flanks brownish buffy; abdomen buffy white; under tail-coverts pure white; axillaries whitish. Wings Bone Brown; lesser upper wing-coverts uniform with back; under wing-coverts dusky. Tail bronzy green, middle rectrices broadly tipped with white, the others more narrowly tipped and edged terminally with white, the outermost with buff. Maxilla (in life) "black"; mandible, "yellow, black tip"; feet "flesh"; iris "brown". Wing, 43 mm.; tail, 41; exposed culmen, 26.5; culmen from base, 30; tarsus, 5.

Remarks: Size similar to longuemareus. Range of measurements of topotypical longuemareus from French Guiana: five adult males—wing, 40.5-42(41.6) mm.; tail, 39-42(40.4); exposed culmen (4), 24-26(25.2); three adult females—wing 41-43(42); tail, 38-40(39.3); exposed culmen (2), 25, 25. Measurements of four adult male ignobilis from Cerro Golfo Triste, Miranda—wing, 37-39(37.6); tail (3), 37-39(38); exposed culmen (3), 20.5-24(22). Measurements of three adult male striigularis from extreme northwestern Venezuela (La Fría, Táchira, 2; Mene Grande, Zulia, 1)—wing, 34-37(35); tail (2), 34-35(34.5); exposed

culmen, 21-22(21.5).

⁵Specimens in U. S. National Museum.

44 Proceedings of the Biological Society of Washington

The subspecific name for this bird has been taken from the isolated range of mountains, the Sierra Imataca, along the northeastern boundary of the state of Bolívar, of which Cerro Tomasote is one of its peaks.

Specimens Examined

P. l. cordobae.-MEXICO⁶: 4.

P. l. saturatus.-GUATEMALA6: 4.

- P. l. subrufescens⁶.—PANAMA: 4. COLOMBIA: 6. ECUADOR: 19.
- P. l. atrimentalis.—COLOMBIA: 1. ECUADOR: 12. PERU: 5.
 P. l. striigularis.—VENEZUELA: La Fría, 28, 1(%); El Vigía,
- P. l. striigularis.—VENEZUELA: La Fria, 23, 1(?); El Vigia 1(?); Mene Grande, 13. COLOMBIA. 37.
- P. l. ignobilis.—VENEZUELA: Santa Bárbara, Barinas, 1(*); Altamira, Barinas, 1(*); Barinitas, 2(*); Urama, 1&; Las Quiguas, 2\subseteq\dagger*; San José de Los Caracas, 1(*); Cerro Golfo Triste, 4&, 1&\dagger*; Cerro Negro, Miranda, 1(*).

P. l. imatacae.-VENEZUELA: Cerro Tomasote, El Palmar, 18

(type).

P. l. longuemareus.—VENEZUELA: Tunapui, 13; Guaraúnos, 19; Yaguaraparo, 1(?); Misión Araguaimujo, 13; Curiapo, 19. TRINI-DAD¹: 63, 49, 4(?). DUTCH GUIANA¹: Paramaribo, 63, 2(?); Kuvata, 13. FRENCH GUIANA¹: Approuage, 43, 39; Cayenne, 43, 2(?); Roche Marie, 13.

P. l. aethopyga.—BRAZIL6: 2.

P. l. idaliae.—BRAZILe: 8.

Colibri coruscans rostratus, new subspecies

Type: From Cerro Huachamacare, Río Cunucunuma, Territorio Amazonas, Venezuela; 2000 meters. Adult male collected December 5, 1950, by Ramón Urbano. (Type on deposit at the American Museum of Natural History.)

Diagnosis: Differs from C. c. germanus (Salvin and Godman) from Cerro Roraima and the Gran Sabana mountains, by decidedly longer bill; tail also longer.

Range: Known from the mountains Huachamacare, Duida, Yaví and Guanay in the Upper Orinoco region in the Subtropical Zone at altitudes from 1700 to 2500 meters.

Description of Type: Top of head and back Rinnemann's Green, uropygium more yellowish, the feathers tipped with dusky; forehead against bill, and lores, with a bluish cast; sides of head, ear-coverts and elongated neck tuft Blue-Violet. Chin and forethroat Blue-Violet, centers of feathers dusky, giving a striped appearance, merging into the Light Blue Green of posterior throat and breast, the feathers with wide dusky shaft stripes also giving a striped appearance; sides, flanks and axillaries Rinnemann's Green; abdomen Blue Violet; under tail-coverts Deep Glaucus Green, edged with pale buffy. Wings Dark Purple Drab; lesser upper wing-coverts and under wing-coverts Rinnemann's Green. Two central rectrices Dark Viridian Green, bluer on outer web; rest of restrices Patent Blue; all rectrices tipped with dusky; a sub-

⁶Specimens in American Museum of Natural History. For localities see Zimmer, Am. Mus. Nov., No. 1449, Jan. 13, 1950, pp. 50, 51.

terminal dark dusky blue band across tail. Bill in life) "black"; feet "black"; iris "dark". Wing, 87 mm.; tail, 58; exposed culmen, 25; culmen from base, 33; tarsus, 6.5.

Remarks: Sexes similar in coloration but male larger. Range of measurements (specimens from Cerro Huachamacare): nine adult males -wing, 86, 84, 84, 85, 80, 84, 82, 87, 83 = 82-87(83.9) mm.; tail, 56, 55, 52, 57, 53, 53, 55, 58, 55 = 52-58(54.9); exposed culmen (8), 25, 24, 23, 24-5, 24, 24.5, 25, 25 = 23-25(24.4); five adult females—wing, 72, 75, 74, 77, 76 = 72-77(74.8); tail, 44, 44, 45, 48, 50 = 44-50(46.2); exposed culmen, 24, 22.5, 24, 26, 22.5 = 22.5 - 26(23.8); four adults of undetermined sex-wing, 78, 74, 76, 75; tail 52, 47, 46, 46; exposed culmen, 23, 23, 23, 23. Measurements of germanus from Mts. Roraima (17) and Kukenam (6); eleven adult males-wing, 81, 82, 83, 82, 80, 80, 85, 83, 81, 80, 82 = 80-85(81.7); tail, 52, 51, 48, 51, 52, 48, 54, 52, 51, 49, 54 = 48-54(51.1); exposed culmen, 22, 21, 21, 21, 21, 21, 20, 21, 21, 24 = 20-24(21.3); eight adult females—wing, 73, 71, 72, 75, 73, 72, 71, 70, 75, 76 = 70-76(72.8); tail, 47, 45, 43, 46, 46, 43, 45, 42, 42, 47 = 42-47(42.6); exposed culmen, 21.5, 20, 21, 21, 21, 21.5, 19, 19, 21, 22 = 19-21.5(20.7); two adults of undetermined sex—wing, 73, 82; tail, 48, 52; exposed culmen, 22, 23.

These measurements show that the bills of the Huachamacare males average 14.6 percent, and the females 15 percent, longer than those from Roraima-Kukenam; in the males the wings are 2.7 percent longer and the tail 7.4 percent, in the females the wings average 2.7 percent longer and the tails 8.5 percent.

The exposed culmen of nine males from Mt. Duida measure 21-26 (24.2), and of twelve females 20-25(22.7) so they are almost typical of the new subspecies, while six males from Mt. Yaví are intermediates measuring 21-25(23). The male from Mt. Guanay measures 26 mm., a maximum length.

The birds from the Gran Sabana mountains, Ptari-tepui (2 &, 20-22, 19, 22) Sororopán-tepui (19, 20.5) and Uaipán-tepui (16, 22; 19, 22) have the short bill of the topotypical germanus from Roraima and also those from Mt. Guaiquinima (3 &, 21-22(21.5); 89, 19-22(20.5)). From Mt. Auyan-tepui one specimen positively sexed as & has a very long bill, 26, and the other specimen of undetermined sex has a short one, 20, but a series is needed for a positive determination; for the time being we refer this population to germanus geographically since the two races of southern Venezuela seem to occupy two distinct areas: germanus in the mountains of the Gran Sabana and Mt. Guaiquinima, and rostratus in the mountains of the Upper Orinoco region.

Specimens Examined

C. c. coruscans.—VENEZUELA: Villa Páez, Páramo de Tamá, 13, 19, 1(?); Bramón, 13; Queniquea, 13, 19; Boca de Monte, 33; Santa Cruz de Mora, 73, 59; Tabay, 93, 1(?); Valle, 63; Páramos: La Culata, 33, 19, Aricagua, 13, Santo Domingo, 53, 29, 1(?), Mucuches, 13, Cendé, 33, 39 and Misisí, 13; Timotes, 23; Cerro Niquitáz, 13; Cubiro, 73, 1(?); Colonia Tovar, 29; El Junquito, 13, 1(?); Pico de Naiguatá, 13; San José de Los Caracas, 1(?); Hda. Izcaragua, 33.

C. c. rostratus.—VENEZUELA: Cerro Huachamacare, 93 (incl.

type), 5 \, 4(\frac{9}); Cerro Duida, 9 \delta^1, 10 \, \text{\$\text{\$\text{\$\geq}\$}}, 2 \, \text{\$\text{\$\geq}\$}; Cerro Yaví 5 \delta\$, 6 \, \text{\$\geq}\$, 2 (\frac{9}{2}); Cerro Guanay, 1 \delta\$, 2 \, \text{\$\geq}\$.

C. c. germanus.—VENEZUELA: Cerro Roraima, 7 &, 6 \, 2 \, 2 \, 2 \, \frac{1}{2}; Cerro Kukenam, 4 &, 2 (\, \frac{9}{2}); Cerro Ptari-tepui, 3 &, 1 \, \frac{9}{2}, 1 \, \frac{9}{2}; Cerro Sororopán-tepui, 1 \, \frac{9}{2}, 1 \, \frac{9}{2}; Cerro Uaipán-tepui, 1 \, \frac{1}{2}, 1 \, \frac{9}{2}; Cerro Auyan-tepui, 1 \, \frac{1}{2}, 1 \, \frac{9}{2}; Cerro Guaiquinima, 3 \, \frac{9}{2}, 8 \, \frac{9}{2}, 4 \, \frac{9}{2}.

Xiphorhynchus picus deltanus, new subspecies

Type: From Misión Araguaimujo, Territorio Delta Amacuro, Venezuela; at sea level. No. 49727, Phelps Collection, Caracas, Venezuela. Adult male collected March 15, 1950, by Ramón Urbano. (Type on deposit at the American Museum of Natural History.)

Diagnosis: Differs from all races of X. picus, except extimus (Griscom) of Panamá and duidae (Zimmer) from the upper Orinoco River, by darker, more olivaceous brownish under parts; back darker than all races; bill, horn color darker than all races. Differs additionally from X. p. picus (Gmelin), closest geographically, by darker crown, more dusky, less brownish; more prominent whitish shaft streaks on mantle, and rectrices darker, more dusky rufous. Differs additionally from altirostris (Léotaud) from Trinidad by shorter wing and bill and crown spots darker, more buffy.

Range: Known only from the Delta of the Orinoco River.

Description of Type: Top of head nearest to Raw Umber, with buffy white spots on forehead, and steaks on crown and nape; mantle Brussels Brown X Prout's Brown with a few very narrow long shaft streaks; uropygium Hay's Russet; lores dusky grayish; sides of head and neck dusky with buffy whitish markings; ear-coverts gray streaked with dusky. Chin buffy white; throat pale buffy, the feathers narrowly edged with dusky giving a squammulated appearance merging into the broadly ovate striped whiter breast feathers which are widely edged with dusky, more brownish olive on posterior breast; abdomen, sides and flanks Snuff Brown; paler posteriorly; under tail-coverts more rufous. Remiges Auburn; outermost primaries dusky except on inner webs basally; other primaries and outer secondaries progressively with less dusky; upper wing-coverts of a more brownish tint; bend of wing pale buffy; outer under wing-coverts Pale Vinaceous-Cinnamon, inner ones and axillaries nearer Pinkish Cinnamon. Tail Bay, under surface near Walnut Brown. Maxilla (in life) "black"; mandible "bone color"; feet 'olive green"; iris "brown". Wing, 98 mm.; tail, 81 exposed culmen, 28; culmen from base, 30; tarsus, 22.

Remarks: Sexes alike. Size similar to picus. Range of measurements: seven adult males—wing, 90-101.5(94.9) mm.; tail (6), 74-81(76.8); culmen from base, 30-32(31.3); three adult females—wing, 91-96(93); tail 74-82(77.3); culmen from base, 29-31(30). Seven adult males of topotypical picus from French Guiana—wing, 93-102(97.6); tail, 75-91 (80); culmen from base, 29-31(30). Measurements of altirostris (Lafresnaye Collection⁸) from Trinidad: one adult female (type)—wing, 107; tail, 79; culmen from base, 34; two specimens, idem, of undetermined sex—wing, 103, 111; tail, 81, 83; culmen from base, 31, 36.5. The bills of altirostris besides being longer are wider and deeper.

This and the following additional new subspecies from the Orinoco

Delta tend to confirm the decided endemism of the avifauna of this heavily forested region which is extensively inundated during the prolonged flood season of the Orinoco River. The actual Delta is approximately 60 kilometers long and 100 wide.

Specimens Examined

X. p. extimus.—PANAMA¹: Agua Dulce, 2 & 2 \, Garachiné I., 1 & 1 \, 2.

X. p. dugandi.—COLOMBIA: Honda, 131.

X. p. picirostris.—VENEZUELA: Paraguaipoa, 23, 29; Río Socuy 73, 49, 19 juv., 2(?); Santa Cruz de Mara, 13, 19; Mene Grande, 2(?); Casigua, 13; Urumaco, 13; Dabajuro, 13, Curimagua, 13; Sabaneta, 13, 29; Península de Paraguaná, 93, 149; 3(?); Quebrada Arriba, 23, 19; Carora, 53, 59, 1(?).

X. p. saturatior.—VENEZUELA: Las Múcuras, 12; Santa Rosalía, 13; Villa del Rosario, 12; Machiques, 23, 13 juv.; La Sierra, 23; Santa Bárbara, 53, 22; La Fría, 33, 12, 1(?); Ureña, 33, 12; El

Vigía, 58, 29, 1(?).

X. p. choicus.—VENEZUELA: Tucacas, 13° ; Urama, 23, 19, 19; Puerto Cabello, 23, 59, 19; Borburata, Puerto Cabello, 13 (type); Carenero, 43, 19; Tacarigua de Mamporal, 13.

X. p. longirostris.—VENEZUELA: Isla de Margarita, 146, 161,

10 9, 2 91, 3(%).

X. p. phalara.—VENEZUELA: Guanare, 19, 1(*); Acarigua, 13; Altagracia de Orituco, 23, 19, 1(*); Camaguán, 13 29; El Amparo, 13, 19, 2(*); Guasdualito, 73, 59, 5(*); San Fernando de Apure, 23, 49, 1(*); Cabruta, 23, 19, 1(*); Caicara, 53, 43, 59, 59, 59, 1(*); Altagracia, 23, 39; Santa María de Ipire, 33, 1(*); Pariaguán, 13; Píritu, 13; 19; Barcelona, 23, 39, 1(*); Puerto de la Cruz, 29; Cumaná, 13, 53, 49; San Antonio del Golfo, 13, 29, 1(*); Carúpano, 1(*).

X. p. altirostris.—TRINIDAD: 3: 19 (type), 2(?).

X. p. picus.—VENEZUELA¹: Ciudad Bolívar, 1ô, 4º; Agua Salada de Ciudad Bolívar, 1ô, 2º; Barrancas, 2ô, 2º, 2º juv. BRITISH GUIANA¹: Wakenaan I., 1º. DUTCH GUIANA¹: Paramaribo, 4ô, 2º. FRENCH GUIANA: Cayenne, 1ô, 5ô¹, 7º¹; Approuage¹, 1ô, 1º. BRAZIL: 141 (var. locs.)¹.

X. p. deltanus.-VENEZUELA: Misión Araguaimujo, 73, (incl.

type), 39, 1(?); Sacupana, 191.

X. p. duidae.—VENEZUELA: Caño Cataniapo, 1\$, 2\$; Sanariapo, 1\$; Isla Ratón, 1\$; Munduapo, 1\$¹; San Fernando de Atabapo, 3\$, 1\$, 1(\$); pica Yavita-Pimichín, 1\$, 1\$; Las Carmelitas, 2\$; San Juan de Manapiare, 3(\$); Puerto Yapacana, 3\$; Esmeralda, 3\$; Sabana Grande, 1\$¹; Valle de los Monos¹, 1\$, 1\$; Caño León, 1\$¹.

X. p. bahiae.—BRAZIL: 30 (var. locs.)1.

X. p. kienerii.—BRAZIL¹: Teffé, 3 Å, 4 \, . X. p. peruvianus.—PERU¹: Santa Rosa, 6 Å, 1 \, ; Sarayacu, 1 Å.

Glyphorhynchus spirurus amacurensis, new subspecies

Type: From Jobure, Río Jobure, Territorio Delta Amacuro, Venezuela. No. 49749, Phelps Collection, Caracas, Venezuela. Adult male collected

48

March 8, 1950, by Ramón Urbano. (Type on deposit at the American Museum of Natural History.)

Diagnosis: Differs from all races of G. spirurus, except G. s. spirurus (Vieillot), by the grayish cast of the forehead; from G. s. spirurus differs in paler throat, more yellowish, less ochraceous, and under parts and crown more olivaceous, less brownish; back more brownish, less rufous.

Range: Known only from the Delta of the Orinoco River.

Description of Type: Top of head Raw Umber, forehead with a grayish cast; back Argus Brown; rump and upper tail-coverts Amber Brown; lores grayish, superciliary stripe buffy; auriculars dusky. Chin and throat Pale Orange-Yellow; breast Saccardo's Umber with prominent pale buffy cuneate shaft spots, merging into the paler abdomen which has narrow faint whitish shaft stripes; under tail-coverts more rufous, also with faint shaft stripes. Wings fuscous; primaries and secondaries edged externally with olivaceous, the tertials more heavily so with more rufous; a broad buffy white band, medially, across the inner vanes of remiges except the three outermost; alula and exposed portion of upper wing-coverts Snuff Brown, an exposed dusky patch on tips of primary coverts; outer under wing-coverts brownish, inner ones white; axillaries whitish. Tail lighter than Auburn, duller on under surface. Bill (in life) "black, base brownish gray"; feet "brownish gray"; iris "dark". Wing, 71 mm.; tail, 69; culmen from base, 13; tarsus, 16.

Remarks: Sexes alike. Size similar to spirurus. Range of measurements: seven adult males—wing, 68-73(70.6) mm.; tail (4), 65-72(69); culmen from base, 12-13(12.8); two adult females—wing, 65-67(66); tail, 61-65(63); culmen from base, 13-13(13). Measurements of spirurus from Cayenne: five adult males—wing, 66-72(69.4); tail, 62-67(64.2); culmen from base, 13-15(14); six adult females—wing, 65-67(65.8); tail (5), 59-65(63); culmen from base, 13-14(13.4).

The color of the back, breast and abdomen of the population of spirurus inhabiting eastern Bolívar is partially intermediate between topotypical spirurus from Cayenne and the new subspecies but most of those specimens can be separated from amacurensis by the darker ochraceous throat.

Specimens Examined

G. s. pectoralis'.—MEXICO: Tolosa, 13. GUATEMALA: 1(?).

G. s. sublestus.—COSTA RICA: 3'. PANAMA: 14'. COLUMBIA: 18'. ECUADOR: 10'. VENEZUELA: La Sierrita, Peripá, 1 &; La Fría, 2 &; Santo Domingo, 1 &; Santa Bárbara, Barinas, 1 Q.

G. s. spirurus.—VENEZUELA: Cerros Roraima, 19; Uei-tepui, 13; Ptari-tepui, 13, 19; Chimantá-tepui, 13, 1(?) Uaipán-tepui, 23, 2(?); Aprada-tepui, 33, 19; Auyan-tepui, 33, 19; Kabanayén, 33, 1(?); Boca Caño Pácara, 13; Campo Urimán, 1(?); Carabobo, Río Cuyuni, 43, 19, 1(?); Camborere, 43, 1(?); Nuria, 93, 59, 2(?). BRITISH GUIANA: 28, Paruima Mission, 19. FRENCH GUIANA: Ipousin, 73, 59; Roche Marie, 13; Cayenne, 13, 19. BRAZIL: 14.

G. s. amacurensis.—VENEZUELA: Jobure, 78 (incl. type), 29, 5(%); San Francisco de Guayo, 2(%).

'Specimens in the American Museum of Natural History. For localities see Zimmer, Am. Mus. Nov., No. 757, pp. 6, 7, Nov. 30, 1934.

G. s. rufiigularis.—VENEZUELA: La Faisca, Cerro Paurai-tepui, 7 &, 3 \, 4 (?); La Candelaria, 1 \, 2; El Polaco, 1 \, 5; Salto Arebuchi, 1 \, 5; Río Icabarú, 1 \, 6; Cerro Guaiquinima, 4 \, 6, 1 \, 9, 3 (?); Salto Guaiquinima, 6 \, 6, 2 \, 9; Río Carún, 1 \, 9; Salto María Espuma, 1 \, 9, 1 (?); Salto Maisa, 3 \, 5, 2 (?); Río Tonoro, 1 \, 9, 1 (?); Cerro Tigre, 1 (?); Río Mato, Río Caura, 1 \, 6, 9 \, 9; Salto Par\, 4 \, 6, 1 \, 9, 1 (?); Boca Chanaro, 1 \, 9; Río Mauo, 1 \, 6; Mani\tilde{n}a, 1 \, 6, 3 \, 9, 1 (?); Sarari\tilde{n}a, 1 \, 6; Sabana Canaracuni, 2 \, 6; Cerro El Negro, Río Cuchivero, 3 \, 6; Santa Rosal\tilde{a}, 3 \, 6; Ca\tilde{n}o Cataniapo, 4 \, 6, 2 \, 9, 3 (?); Sanariapo, 1 \, 6; Ca\tilde{n}o Cuao, 1 (?); San Fernando de Atabapo, 1 \, 6, 1 \, 9; Pica Yavita-Pimich\tilde{n}, 8 \, 6, 3 (?); Las Carmelitas, 7 \, 6, 1 \, 9, 4 (?); Kabadisoca\tilde{n}a, 2 \, 9; Chajura\tilde{n}a, 1 \, 6, 1 \, 9, 1 \, (?); Puerto Yapacana, 1 \, 6, 2 \, 2 \, ?); Cerro Par\tilde{n}, 1 \, 6; San Carlos, 1 \, (?); El Carmen, 2 \, 6, 1 \, 9; nacientes Río Siapa, 1 \, 6, BRASIL: 47 \, 7; Boca Río Castanho, Río Padauiri, 1 \, 9; Base Canoas, Río Castanho, 1 \, 6, ECUADOR: 7 \, 7.

G. s. castelnaudi'.—PERU: 39. ECUADOR: 8. BRAZIL: 17.

G. s. albigularis.—BOLIVIA: 27.

G. s. inornatus.—BRAZIL 107.

G. s. cuneatus.—BRAZIL: 317.

Myrmotherula behni camanii, new subspecies

Type: From Cerro Camani, Territorio Amazonas, Venezuela; 1250 meters. No. 52367, Phelps Collection, Caracas, Venezuela. Adult female collected February 15, 1951, by Ramón Urbano. (Type on deposit at the American Museum of Natural History.)

Diagnosis: Differs from the females of M. b. inornata Sclater and M. b. yavii Zimmer and Phelps by pale olivaceous upper parts instead of rufous brown; under parts more olivaceous, less brownish. The male differs from yavii in paler gray upper parts and the crown uniform with the back without the blackish tips to the feathers.

Range: Known only by a male and a female from Mt. Camani near the upper Manapiare River, an affluent of the Ventuari, in the Subtropical Zone (1250 m.).

Description of Type: Top of head Light Brownish Olive, merging into the Medal Bronze of back and uropygium; lores grayish; sides of head grayish olive. Chin and throat whitish; breast, sides and abdomen Deep Olive Buff, merging into the Dark Olive Buff of flanks; under tail-coverts Tawny-Olive. Wings Benzo Brown; primaries and secondaries edged outwardly with grayish brown; tertials and upper wing-coverts heavily edged with Argus Brown; remiges narrowly edged on inner webs, basally, with buffy white. Tail Benzo Brown, the rectrices heavily edged outwardly with Argus Brown. Bill (in life) 'black, base of mandible brownish flesh''; feet 'brownish gray''; iris 'dark''. Wing 54 mm.; tail, 37; culmen from base, 14; tarsus, 16.

Remarks: Sexes different in color. Size similar to yavii. Measurements of the adult male from Cerro Camani: wing, 58 mm.; tail, 36; culmen from base, 15; tarsus, 15.

The unique male differs from yavii as in diagnosis. Measurements: wing, 58; tail, 38; culmen from base, 15; tarsus, 16.

Specimens Examined

M. b. inornata.—VENEZUELA: Arabupu, Cerro Roraima, 16, 16 juv., 19.

M. b. yavii.—VENEZUELA: Cerro Yaví, 13, 13 juv., 29; Cerro El Negro, alto Río Cuchivero, 13; Cerro Parú, 13.

M. b. camanii.—VENEZUELA: Cerro Camani, 13, 19 (type).

Pipromorpha oleaginea dorsalis, new subspecies

Type: From Cerro Roraima, Gran Sabana, Estado Bolívar, Venezuela; 1840 meters. No. 50356, Phelps Collection, Caracas, Venezuela. Adult of undetermined sex collected February 8, 1950, by Manuel Castro. (Type on deposit at the American Museum of Natural History.)

Diagnosis: Differs from all forms of P. oleaginea by darker green upper parts, less yellowish tint; differs additionally from P. o. intensa Zimmer and Phelps from southeastern Bolívar, by paler abdomen and grayer, less yellowish tint on throat and breast.

Range: Known only by the type from Mt. Roraima, in the Subtropical Zone, at 1840 meters.

Description of Type: Top of head, back and rump Olive-Green, merging into the Warbler Green of upper tail-coverts; sides of head more grayish. Throat grayish olive merging into the more brownish of breast and sides, which merges into the Honey Yellow of abdomen, flanks and under tail-coverts. Wings Clove Brown; remiges, except outermost, narrowly edged externally with olivaceous, tertials more widely so and whitish; greater and lesser wing-coverts edged and tipped with buffy olive forming two indistinct bands; bend of wing Chamois; under wing-coverts and axillaries darker than Ochraceous-Buff; inner webs of remiges with pale buffy edgings except terminally. Tail Olive-Brown, the rectrices edged externally with Warbler Green. Maxilla (in life) "black"; mandible (in dried skin) flesh with black tip; feet (in life) "dark gray"; iris "brown". Wing, 63 mm.; tail, 46; culmen from base, 13.5; tarsus, 16.

Remarks: Size similar to P. o. intensa. Measurements of five adult males of intensa: wing, 63-66(63.8) mm.; tail, 48.5-50(49.3); culmen from base, 13-14(13.2).

This must be an extremely rare species on Mt. Roraima where many expeditions have hitherto failed to collect it. The other subspecies in Venezuela are of the Tropical Zone.

Specimens Examined

P. o. oleaginea.—BRAZIL8: 1.

⁶Specimens in the American Museum of Natural History. For localities see Zimmerman, Am. Mus. Nov., No. 1126, pp. 13, 14, 1941.

%idem. For list of localities see Zimmer and Phelps, Am. Mus. Nov., No. 1312, p. 17, 1946.

Mato, 23, 19; Barinitas, 19; Ciudad Bolivia, 23, 19; Santa Bárbara, 1(?); Santo Domingo, 13, 29.

P. o. hauxwellis.-ECUADOR: 28. PERU: 10.

P. o. maynana.—PERU9: 19.

P. o. pacifica.—ECUADOR8: 17.

P. o. wallacei⁸.—BRAZIL: 46. FRENCH GUIANA: 2. DUTCH GUIANA: 8. BRITISH GUIANA: 6.

P. o. dorsalis.—VENEZUELA: Cerro Roraima, 1(%) (type).

P. o. intensa.—VENEZUELA: Carabobo, Río Cuyuni, 2(*); Camborere, 1&; Cerro Chimantá-tepui, 1(*); Caño Pácara, Río Caroní 1(*); Urimán, 1&, 1\varphi; Campamento Comején, Cerro Guaiquinima, 2&; Salto Maria Espuma 2&, 2(*); Salto Maisa, 3& (incl. type), 2\varphi, 3(*); Salto El Payaso, 1\varphi, 1(*); Raudal Capuri, 1\varphi, 1(*); Raudal Caranca, 1(*); Río Arawa, Alto Caura 1&; Sabana Canaracuni, 1&, 1\varphi; Chajuraña, Alto Ventuari, 1(*). BRITISH GUIANA: Paruima Mission, Río Kamarang, 1\varphi.

P. o. pallidiventris.—VENEZUELA: 28⁸; Cristóbal Colón, 13; Cerro Azul, 19; Yaguaraparo, 13, 19; Tunapui, 13; El Pilar, 13, 2(?); Quebrada Bonita, 19, 1(?); Los Altos, 43, 1(?); Bergantín, 13; Misión Araguaimujo, Delta del Orinoco, 1(?); Caño Dabomana, 1(?);

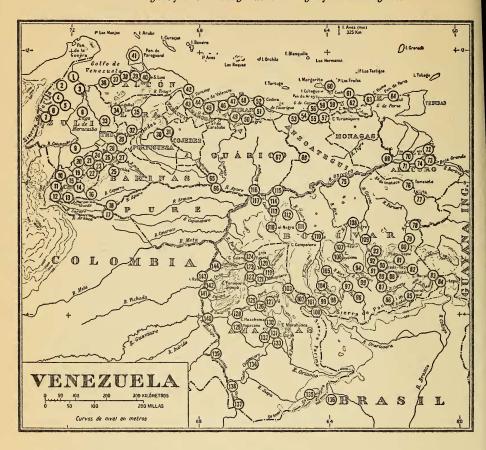
Jobure, 3 &. TRINIDAD⁸: 14. TOBAGO⁸: 1.

P. o. parca.—VENEZUELA: La Fría, 3 &, 1(%); El Vigía, 2 &, 2 &; La Sierra, Perijá, 2 &, 1(%); La Sabana, 1 &. COLOMBIA*: 40. PANA-MA*: 13.

P. o. lutescens.—PANAMA⁸: 27.

P. o. dyscola.—PANAMA⁸: 24.

P. o. assimilis⁸.—COSTA RICA: 10. NICARAGUA: 14. GUATE-MALA: 53. MEXICO: 4.



List of Localities

94 Capuri, Raudal

31	Acarigua	64	Azul, Cerro
75	Agua Salada de Ciudad	54	Barcelona
	Bolívar	27	Barinitas
115	Altagracia	69	Barrancas
50	Altagracia de Orituco	55	Bergantín
27	Altamira (Barinas)	14	Boca de Monte
118	Alto, Raudal	44	Borburata
90	Aprada-tepui, Cerro	12	Bramón
83	Arabupú	116	Cabruta
70	Araguaimujo, Misión	117	Caicara (Bolívar
104	Arawa, Río	65	Camaguán
87	Arebuchi, Salto	122	Camani, Cerro
22	Aricagua, Páramo	80	Camborere
126	Asisa, Alto Río	99	Canaracuni

93

Auyan-tepui, Cerro

125 Parú, Río 119 Parucito, Caño

79	Carabobo	18	Guasdualito
95	Caranca, Raudal	130	Huachamacare, Cerro
52	Carenero	86	Icabarú, Río
109	Caroní, Río	48	Izcaragua, Hacienda
35	Carora	73	Jobure
112	Carretico, Puerto	73	Jobure, Río
95	Carún, Río	102	Kabadisocaña
61	Carúpano	81	Kabanayén
36	Casigua	83	Kukenám, Cerro
134	Casiquiare, Caño	85	La Candelaria, Mina
136	Castanho, Rio (Brazil)	24	La Culata, Páramo
144	Cataniapo, Caño	85	La Faisca, Mina
111	Caura, Río	10	La Fría
32	Cendé, Páramo	108	La Paragua
103	Chajuraña	7	La Sabana
105	Chanaro, Boca Río	7	La Sierra
88	Chimantá-tepui, Cerro	128	Las Carmelitas
75	Ciudad Bolívar	4	Las Múcuras
25	Ciudad Bolivia	44	
46	Colonia Tovar	133	León, Caño
106	Comején, Campamento	56	Los Altos
21	Conejos, Páramo	6	Machigues
129	Corocoro, Isla	143	Maipures (Colombia)
64	Cristóbal Colón	96	Maisa, Salto
142	Cuao, Caño	121	Manapiare, Río
113	Cuchivero, Río	100	Maniña
58	Cumaná	8	Maracaibo, Lago
132	Cunucunuma, Río	60	Margarita, Isla de
74	Curiapo	97	María Espuma, Salto
40	Curimagua	112	
78	Cuyuni, Río	98	Mato, Río
37		33	Mauo, Río Mene Grande
72	Dabajuro	23	Mérida
131	Dabomana, Caño		
	Duida, Cerro	29 23	Misisí, Páramo
17 137	El Amparo		Mantañas Mantañas
	El Carmen	26	Mucuchies, Páramo
46	El Junquito	141	Munduapo
118	El Negro, Cerro	47	Naiguatá, Pico de
76	El Palmar	123	Negro, Caño
94	El Payaso, Salto	50	Negro, Cerro (Miranda)
62	El Pilar	32	Niquitáz, Cerro
85	El Polaco, Mina	77	Nuria
20	El Vigía	89	Pácara, Boca Caño
133	Esmeralda	134	Pacila, Río
49	Golfo Triste, Cerro	110	
82	Gran Sabana	41	Paraguaná, Península de
106	Guaiquinima, Cerro	108	
106	Guaiquinima, Salto	1	Paraguaipoa
30	Guanare	68	Pariaguán
124	Guanay, Cerro	127	Parú, Cerro

62 Guaraunos 48 Guarenas

54 Proceedings of the Biological Society of Washington

85	Paurai-tepui, Cerro	5	Santa Rosalía (Zulia)
53	Píritu	13	Santo Domingo (Táchira)
81	Ptari-tepui, Cerro	101	Sarariña
44	Puerto Cabello	135	Siapa, nacientes Río
56	Puerto de la Cruz	2	Socuy, Río
34	Quebrada Arriba	81	Sororopán-tepui, Cerro
57	Quebrada Bonita	23	Tabay
15	Queniquea	51	Tacarigua de Mamporal
45	Rancho Grande	12	Tamá, Páramo
143	Ratón, Isla	108	Tigre, Cerro
83	Roraima, Cerro	28	Timotes
126	Sabana (Río Asisa)	76	Tomasote, Cerro
133	Sabana Grande	107	Tonoro, Río
39	Sabaneta	42	Tucacas
71	Sacupana	62	Tunapui
59	San Antonio del Golfo	92	Uaipán-tepui, Cerro
138	San Carlos (Amazonas)	84	Uei-tepui, Cerro
66	San Fernando de Apure	43	Urama
140	San Fernando de Atabapo	11	Ureña
72	San Francisco de Guayo,	91	Urimán, Campo
	Misión	38	Urumaco
23	San Jacinto	24	Valle
48	San José de Los Caracas	133	Valle de los Monos
121	San Juan de Manapiare	128	Ventuari, Río
143	Sanariapo	12	Villa Páez
9	Santa Bárbara (Zulia)	4	Villa del Rosario
16	Santa Bárbara (Barinas)	63	Yaguaraparo
3	Santa Cruz de Mara	129	Yapacana, Cerro
19	Santa Cruz de Mora	129	Yapacana, Puerto

120 Yaví, Cerro

139

Yavita-Pimichin, Pica

67 Santa María de Ipire 114 Santa Rosalía (Bolívar)